

Tracking Crime on Buses

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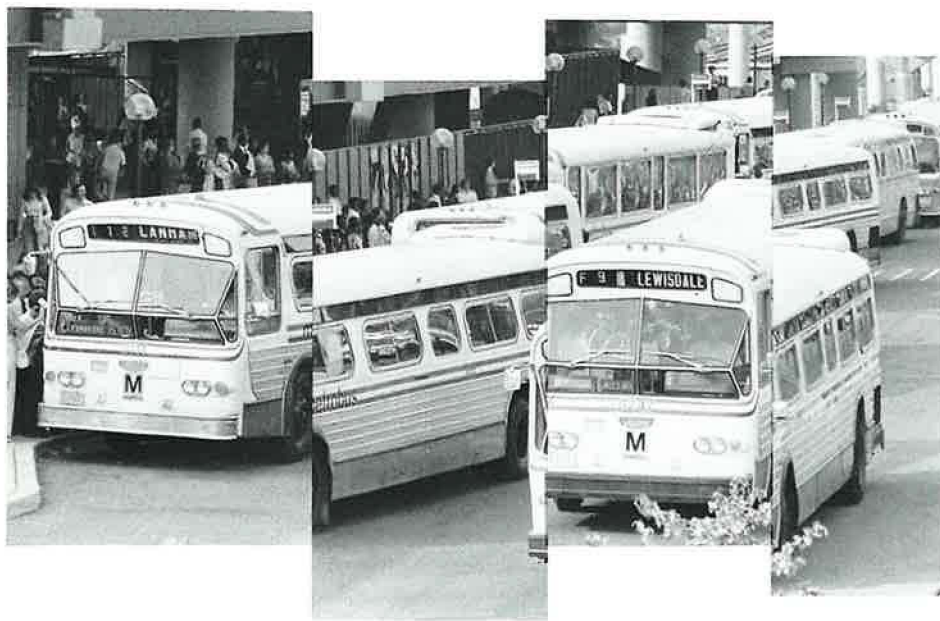
Crime events that receive media attention, such as the widely publicized shooting on the New York subway by Bernhard Goetz, have highlighted some of the dangers of travel on public transit in the United States. Most media reports have focused on crime in urban subway systems, while little attention has been given to crime on buses. Yet bus systems can be as dangerous as rail systems in exposing patrons to crime, and buses carry more than 70 percent of the transit passenger trips made in the United States.

In a recently completed study of bus crime in west central Los Angeles, funded by the Urban Mass Transportation Administration¹, the incidence of bus crime in west central Los Angeles was measured, sources of crime reporting errors were assessed, and environmental factors contributing to bus crime were isolated.

A survey was conducted by telephone of a large area in west central Los Angeles. The Institute for Social Science Research at the University of California at Los Angeles administered the survey, the largest ever conducted to evaluate bus crime. A sample of 1,088 randomly selected households participated and one adult from each household was interviewed.

Copies of the full report, *Factors Affecting the Incidence of Bus Crime in Los Angeles* (Report CA-06-0195) by Ned Levine and Martin Wachs, may be obtained from the University Research and Training Program, Office of Technical Assistance, Urban Mass Transportation Administration, U.S. Department of Transportation, Washington, D.C. 20590.

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Amount of Bus and Bus-Related Crimes

Crimes occurring on buses, at bus stops, and when patrons were walking to or from bus stops were examined. Many transit authorities resist identifying crimes outside buses or trains as transit-related, resistance that is apparently related to financial liability. However to passengers, a crime at a bus stop or at the entry of a train station or en route to or from a transit point is normally viewed as part of the transit trip. In addition, to understand how crime affects travel decisions, it is necessary to gather information about the entire transit trip regardless of transit operator liability.

It was found that the incidence of bus and bus-related crime in west central Los Angeles was much greater than has been documented previously. About 9 percent of respondents had been victimized at some time in the past; 3 percent were victimized in 1983 alone. Using 1983 as a standard, a household exposure rate was constructed. About 5 percent of the households contacted had at least one member victimized in 1983.

If the same rate of victimization applies to all households in the study area (plus and minus a sampling error), then between 17,000 and 30,000 bus-related crimes occurred in 1983 for west central Los Angeles. This estimate is 20 to 35 times the number published by the local transit agency, which reported 843 crimes for their entire service area (1). Purse snatching, pickpocketing, jewelry snatching, and assault were the most common types of transit-related crimes reported.

Sources of Reporting Error

It is believed that the results do not indicate a sudden upswing in bus-related crime, but that most transit crimes go uncounted because of the way information is maintained. Of the crimes that occurred while survey respondents were making trips, only 46 percent took place on buses, while 32 percent occurred at bus stops and 22 percent when

victims were walking to or from bus stops. As previously noted, most agencies do not record crimes occurring at bus stops or those occurring when victims are walking to and from bus stops as being transit-related.

Furthermore, only 42 percent of the victims reported the crimes to the police, and of the crimes reported only 62 percent resulted in a police investigation. When reported crimes were investigated by the police, only 4 percent of the time was the investigation done by transit police, whereas 90 percent of the time it was done by the local police. And because the police do not categorize crime by transit usage, the link is lost for even those crimes that are investigated.

When proper accounting takes into effect all of these sources of information "leakage," fully 20 to 30 percent of all crimes committed in the study area were related to bus travel, including the waiting and walking portions of the trips. Viewed this way, bus crime is a far more serious problem for urban policymakers than has been obvious in the past.

A major revision of transit crime reporting systems is necessary. Most local police departments in the United States use crime reporting forms based on the Federal Bureau of Investigation's Uniform Crime Report. In this system of reporting, crimes are not categorized by the activities of victims, nor are relevant environmental characteristics that may contribute to crimes categorized. To link crimes to travel activity (as well as to other environmental activities), additional reporting categories should be included on police reporting forms. And if informational feedback on the location of different types of crimes could be expedited and cross-classified by the activities of victims, the statistical information would be more useful in the deployment of police.

Victims of Bus Crimes

Victims of bus crimes experience considerable financial loss as well as physical and emotional harm. In 1983 the median financial loss in a bus crime was

\$45. Most bus users are low-income persons; thus this amount often represents a significant loss. About one-fifth of the victims in the study were injured and many experienced serious injuries; there was undoubtedly financial loss, either to the victims or to the employers, because of injuries.

According to the results of the study, frequency of bus use was the most important correlate of victimization. Examining moderate and heavy bus users only, it was found that the elderly, women, Hispanics, and low-income persons were particularly vulnerable to bus-related crimes. There was also substantial fear of using buses, especially for travel at night and to downtown Los Angeles, which appeared to be related to actual vulnerability. Women, Hispanics, persons with little education, and those who had been victimized or who knew others who had been victims perceived bus travel as less safe than did others.

It was also found that victims of bus crimes, people who had witnessed bus crimes, and those who perceived bus travel as less safe were less likely to have used buses in the previous 6 months, although these variables were secondary in importance to automobile access, the convenience of bus travel, and age. The results suggest that fears of personal security may affect ridership to some extent, especially among travelers who are not transit dependent.

Environmental Correlates

Significant environmental correlates of bus crime were evident in the study results. Overcrowding was a major factor perceived as contributing to bus crime. This factor was mentioned by victims and witnesses far more than any other, especially for crimes occurring on buses. It was found that incidents happen in all parts of buses, but that life-threatening incidents were more likely to occur in the back. For crimes at bus stops, overcrowding was important in some locations but not in others. Most crimes occurred in the late afternoon and early evening, and usually

Type of Crime by Locus of Occurrence (percentage of crimes for each locus)

Type of Crime	Locus of Occurrence			
	All Crimes	On Bus	At Bus Stop	To/From Bus Stop
Larceny	73.3	76.1	70.2	66.2
Life threatening	23.0	20.1	25.8	30.9
Other	3.8	3.8	3.9	2.9

many people were present. But the exceptions were significant; crimes that occurred at night or when few persons were around were more likely to be life threatening.

Dangerous Bus Stops

Bus-stop crimes were analyzed at specific locations. The bus stops at which the largest numbers of crimes occurred were distributed over the study area at locations somewhat removed from one

another. A method was developed for detecting specific locations that were dangerous, and observations were made at three of the most dangerous locations. The factors contributing to crime at each location were different, indicating that any solution developed must be tailored to the specific circumstances.

At the location having the largest number of bus-stop crimes reported—a busy intersection in downtown Los Angeles—pedestrian crowding appeared to be critical in encouraging thefts, particularly purse snatching, pickpocketing, and jewelry snatching. For example, during the evening rush hour, when there is disorganization on the sidewalks due to increased numbers of persons leaving work and limited sidewalk space, petty thieves can operate easily in such a confused environment. It was proposed that local authorities create a bus shelter that would separate passengers waiting for buses from those passing by, making it more difficult for thieves to operate effectively. The existing bus shelter in Los Angeles (closed on both ends with a seat) does not offer sufficient protection, nor does it appear to be particularly popular with travelers.

At another bus-stop location, which had a number of crimes reported and was also perceived as the most dangerous in the area, it appeared that bus-related crimes happened in association with marginal social activity and drug trading. Many businesses near the intersection appeared to be supportive of this type of activity, such as several bars,

adult book shops and cinemas, game arcades, a pawnshop, and many motels and residential hotels. During the observations, several drug trades took place as well as a number of fights. There was also extensive prostitution, with nearby residential hotels used as a base.

Because bus patrons waiting at two of the stops at the intersection were exposed to unnecessary dangers, it was proposed that the bus stops be moved one or two blocks away. This would require some adjustment by patrons because the intersection is a transfer point. However, there would be improved protection for patrons taking buses in the area. Respondents were questioned about choosing between two bus stops on the same route, one closer but less well lit and one further away but better lit. The vast majority, including elderly persons, favored the bus stop that was further away but better lit. By implication, moving a bus stop to protect passengers would be publicly acceptable.

At another of the most dangerous bus-stop locations, different factors appeared to be significant in encouraging

Perceived Contributing Factors (number of mentions by respondents)

Perceived Factor	Number of Mentions
Overcrowding on bus	137
Victim was vulnerable	54
Dangerous location	33
Dark/late at night	25
Valuables were exposed	25
Few people at bus stop	18
Ease of escape for criminal	16
Victim provoked situation	13
Overcrowded bus stop	9
Noninvolvement by others	5

A crowded downtown bus stop.



bus and bus-related crimes. A large high school is adjacent to a neighborhood populated largely by elderly persons. At the close of school each day, there was intense crowding at the bus stops next to the school, and crimes appeared to occur during this time. Elderly persons who were interviewed reported a fear of being at the bus stop at 3:00 p.m. when the school day ended. Three suggestions were made for improving security: limited police presence at the close of school each day; improved scheduling of buses to reduce the bus-stop crowding (which occurs for about 40 minutes); and an education program geared toward making the students aware of the needs of elderly persons.

Strong Public Support for Bus Crime Prevention

There was strong support among the survey respondents for a bus crime prevention program. When asked how such a program should be financed, the ma-

jority (including bus users) preferred increased fares to other methods with which they were presented. In terms of priorities of the bus crime prevention program, increased police protection received the greatest emphasis.

Several bus and shelter design options that could be incorporated into a preventive strategy were evaluated. Respondents believed that the 43-seat bus was most safe from crime, while articulated and double-deck buses were least favored. Apparently, the distance of patrons from the driver is a critical variable in this perception. Also, more respondents favored clear glass windows over tinted glass windows in terms of offering safety from crime, although the differences were not large. On the other hand, opinion was evenly divided between those favoring sheltered bus stops and those favoring open bus stops; the specific design of the shelter appeared to be more relevant.

Many changes can be made to reduce bus and bus-related crimes, some inexpensively: re-scheduling to reduce overcrowding; redesigning the back of the bus to allow better passenger flow; improving drivers' roles in protecting passengers; deploying police at dangerous bus stops at particular times; moving bus stops from dangerous locations; physical separation at crowded bus stops

of passengers waiting for buses from those passing by; community outreach around dangerous bus stops; and special outreach for schools. The effectiveness of any of these approaches would depend on where it is implemented.

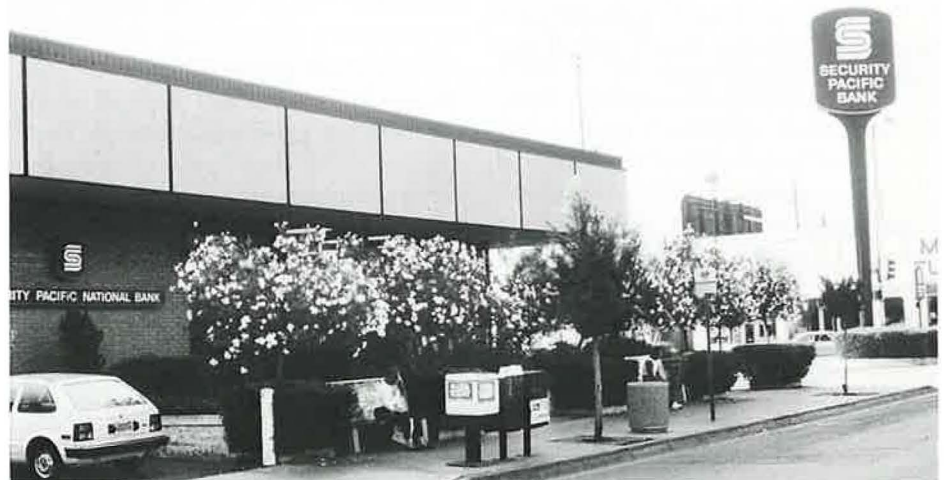
Recommendations

Three general recommendations were made in the study. First, the existing system for collecting information on transit crime has fundamental faults that can only be corrected by revising the categories used in measuring crime. Because transit police only receive information about a small minority of crimes occurring during bus travel, improvements must come about through revising the police recording forms used by local police agencies. Second, environmental information is important for understanding factors contributing to crime and should be included in any transit crime data base. Third, the physical and social causes of bus-stop crime are particular to the environment surrounding each stop. Any strategy for protecting passengers at bus stops must be based on an assessment of the unique elements at a particular location.

In response to this study, the local transit agency in Los Angeles (Southern



Bus stop opposite high school (when uncrowded).





Bus stop opposite high school (when crowded).

California Rapid Transit District) created an interagency task force to examine many of the recommendations. The task force is made up of members from the transit agency, the local police and sheriff's departments, city and county transit agencies, and representatives of elected officials. The task force has been considering various options, recognizing that cooperation and coordination between agencies is necessary to reduce the severity of the problem.

Reference

1. *Yearly Crime Report*. Transit Police, Southern California Rapid Transit District, Los Angeles, 1983.



Highway Capacity Manual Errata

The truism that "nobody's perfect" has been borne out again. TRB's *Special Report 209: Highway Capacity Manual* contains typographical errors that we would like to correct.

Based on information supplied by diligent readers and on careful study by the TRB Committee on Highway Capacity and Quality of Service, a list of errata to the recently published *Manual* has been compiled. The errata list is printed on three-hole loose-leaf sheets that can be inserted in the *Manual*.

Copies of the errata will be provided with all future purchases of the *Manual*. Copies will also be mailed free of charge to those on the initial distribution list when the *Manual* was published in 1985. Those who have purchased copies of the *Manual* since that time should contact the TRB Publications Office (Transportation Research Board, 2101 Constitution Avenue, N.W., Washington, D.C. 20418; telephone 202-334-3218) to obtain the information.